

```
FILE 'REGISTRY' ENTERED AT 12:56:52 ON 07 AUG 2009
L1      STRUCTURE UPLOADED
L2      50 S L1
L3      STRUCTURE UPLOADED
L4      50 S L3
L5      1636 S L3 SSS FULL

FILE 'HCAPLUS' ENTERED AT 12:58:23 ON 07 AUG 2009
L6      9084 S L5
L7      1230959 S OLIGONUCLEOTIDE OR DNA OR RNA OR PHOSPHORAMIDITE
L8      112 S L6 AND L7
L9      80 S L8 AND (PY<2003 OR AY<2003 OR PRY<2003)

FILE 'STNGUIDE' ENTERED AT 12:59:16 ON 07 AUG 2009

FILE 'HCAPLUS' ENTERED AT 13:01:55 ON 07 AUG 2009
L10     164283 S (SOLID SUPPORT) OR (SOLID PHASE) OR BEAD OR PHOSPHORAMIDITE
L11     4 S L9 AND L10
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=> file registry
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.22	0.22

FILE 'REGISTRY' ENTERED AT 12:56:52 ON 07 AUG 2009
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 5 AUG 2009 HIGHEST RN 1173150-47-4
DICTIONARY FILE UPDATES: 5 AUG 2009 HIGHEST RN 1173150-47-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=>

Uploading C:\Program Files\STNEXP\Queries\10539625saccharin.str



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chain nodes :
10 11 13
ring nodes :
1 2 3 4 5 6 7 8 9
chain bonds :
7-13 9-10 9-11
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9
exact/norm bonds :
5-7 6-9 7-8 7-13 8-9 9-10 9-11
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

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G1:O,S

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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 13:CLASS

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L1 STRUCTURE UPLOADED

=> s l1

SAMPLE SEARCH INITIATED 12:57:05 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1134 TO ITERATE

100.0% PROCESSED 1134 ITERATIONS

50 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 20660 TO 24700

PROJECTED ANSWERS: 10624 TO 13574

L2 50 SEA SSS SAM L1

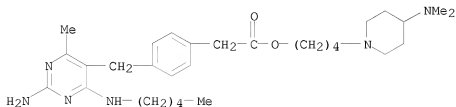
=> d l2 scan

L2 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

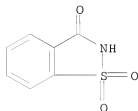
IN Benzeneacetic acid, 4-[12-amino-4-methyl-6-(pentylamino)-5-pyrimidinylmethyl]-, 4-[4-(dimethylamino)-1-piperidinyl]butyl ester, compd. with 1,2-benzisothiazol-3(2H)-one 1,1-dioxide (1:?)

MF C30 H48 N6 O2 . x C7 H5 N O3 S

CM 1



CM 2

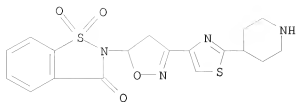


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L2 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

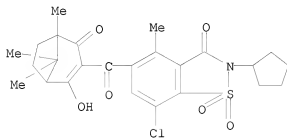
IN 1,2-Benzisothiazol-3(2H)-one, 2-[4,5-dihydro-3-[2-(4-piperidinyl)-4-thiazolyl]-5-isoxazolyl]-, 1,1-dioxide

MF C18 H18 N4 O4 S2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN INDEX NAME NOT YET ASSIGNED
 MF C25 H28 Cl N O6 S



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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Uploading C:\Program Files\STNEXP\Queries\10539625saccharin2.str



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ring nodes :
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chain bonds :
7-13 8-14 9-10 9-11
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exact/norm bonds :
5-7 6-9 7-8 7-13 8-9 9-10 9-11
exact bonds :
8-14
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

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G1:O,S

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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 13:CLASS 14:CLASS

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L3 STRUCTURE UPLOADED

=> s 13

SAMPLE SEARCH INITIATED 12:57:53 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1134 TO ITERATE

100.0% PROCESSED 1134 ITERATIONS

50 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 20660 TO 24700

PROJECTED ANSWERS: 1013 TO 2065

L4 50 SEA SSS SAM L3

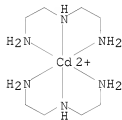
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L4 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

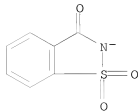
IN Cadmium(2+), bis[N-(2-(amino-κN)ethyl)-1,2-ethanediamine-κN,κN']-, (OC-6-2'2)-, salt with 1,2-benzisothiazol-3(2H)-one 1,1-dioxide (1:2) (9CI)

MF C8 H26 Cd N6 . 2 C7 H4 N O3 S

CM 1



CM 2



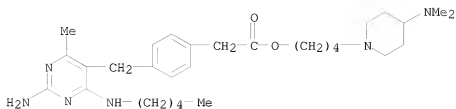
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L4 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

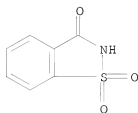
IN Benzeneacetic acid, 4-[[2-amino-4-methyl-6-(pentylamino)-5-pyrimidinyl]methyl]-, 4-[4-(dimethylamino)-1-piperidinyl]butyl ester, compd. with 1,2-benzisothiazol-3(2H)-one 1,1-dioxide (1:?)

MF C30 H48 N6 O2 . x C7 H5 N O3 S

CM 1



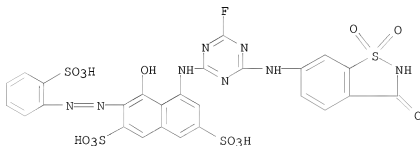
CM 2



L4 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN 2,7-Naphthalenedisulfonic acid, 5-[[4-[(2,3-dihydro-1,1-dioxido-3-oxo-1,2-benzisothiazol-6-yl)amino]-6-fluoro-1,3,5-triazin-2-yl]amino]-4-hydroxy-3-[2-(2-sulphophenyl)diazenyl]-

MF C26 H17 F N8 O13 S4



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

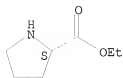
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L4 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

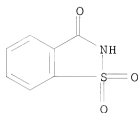
IN L-Proline, ethyl ester, compd. with 1,2-benzisothiazol-3(2H)-one
1,1-dioxide (1:1)
MF C7 H13 N O2 . C7 H5 N O3 S

CM 1

Absolute stereochemistry. Rotation (-).

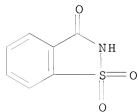


CM 2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN 1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, mercury(2+) salt, hydrate
(2:1:2)
MF C7 H5 N O3 S . H2 O . 1/2 Hg



● 1/2 Hg (II)

● H2O

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s l3 sss full

FULL SEARCH INITIATED 12:58:19 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 21457 TO ITERATE

100.0% PROCESSED 21457 ITERATIONS

1636 ANSWERS

SEARCH TIME: 00.00.01

L5 1636 SEA SSS FUL L3

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

186.84

187.06

FILE 'HCAPLUS' ENTERED AT 12:58:23 ON 07 AUG 2009

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FILE COVERS 1907 - 7 Aug 2009 VOL 151 ISS 7

FILE LAST UPDATED: 6 Aug 2009 (20090806/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s l5

L6 9084 L5

=> s oligonucleotide or DNA or RNA or phosphoramidite
64854 OLIGONUCLEOTIDE
970615 DNA
377627 RNA
3487 PHOSPHORAMIDITE
L7 1230959 OLIGONUCLEOTIDE OR DNA OR RNA OR PHOSPHORAMIDITE

=> s l6 and l7
L8 112 L6 AND L7

=> s l8 and (PY<2003 or AY<2003 or PRY<2003)
22984528 PY<2003
4509429 AY<2003
3978924 PRY<2003
L9 80 L8 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> file stnguide
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 2.85 189.91

FILE 'STNGUIDE' ENTERED AT 12:59:16 ON 07 AUG 2009
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 31, 2009 (20090731/UP).

=> file hcaplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.28 190.19

FILE 'HCAPLUS' ENTERED AT 13:01:55 ON 07 AUG 2009
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FILE COVERS 1907 - 7 Aug 2009 VOL 151 ISS 7
FILE LAST UPDATED: 6 Aug 2009 (20090806/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

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<http://www.cas.org/legal/infopolicy.html>

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The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s (solid support) or (solid phase) or bead or phosphoramidite

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573616 SUPPORT
9921 SOLID SUPPORT
      (SOLID(W)SUPPORT)
1212925 SOLID
2008323 PHASE
120201 SOLID PHASE
      (SOLID(W)PHASE)
35676 BEAD
3487 PHOSPHORAMIDITE
L10 164283 (SOLID SUPPORT) OR (SOLID PHASE) OR BEAD OR PHOSPHORAMIDITE
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=> s l9 and l10

L11 4 L9 AND L10

=> file stnguide

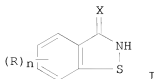
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.85	193.04

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 31, 2009 (20090731/UP).

=> d l11 1-4 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L11 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Process for the solid phase preparation of
oligodeoxyribonucleotides using heterocycle activators
GI



AB A process for the synthesis of an oligonucleotide is provided in which an oligonucleotide is assembled on a swellable solid support using the phosphoramidite approach in the presence of an activator I, wherein n is 0-4; R for each occurrence is a substituent, or two adjacent R groups taken together with the carbon atoms to which they are attached form a six membered saturated or unsat. ring; and X is O or S; the activator is not tetrazole or a substituted tetrazole. Preferred activators are pyridinium, imidazolium and benzimidazolium salts; benzotriazole and derivs. thereof; and saccharin or a saccharin derivative Preferred swellable solid supports comprise functionalized polystyrene, partially hydrolyzed polyvinyl-acetate or poly(acrylamide).

AN 2004:534221 HCAPLUS <<LOGINID:20090807>>

DN 141:54582

TI Process for the solid phase preparation of oligodeoxyribonucleotides using heterocycle activators

IN McCormac, Paul

PA Avecia Limited, UK

SO PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DT Patent

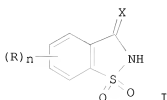
LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004055036	A1	20040701	WO 2003-GB5464	20031216 <--
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	WO 2003091267	A1	20031106	WO 2003-GB1795	20030425 <--
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	AU 2003292423	A1	20040709	AU 2003-292423	20031216 <--
	EP 1575975	A1	20050921	EP 2003-768001	20031216 <--
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	US 20060149052	A1	20060706	US 2006-539625	20060103 <--
PRAI	GB 2002-29443	A	20021218	<--	
	WO 2003-GB1795	A	20030425		
	GB 2002-9539	A	20020426	<--	

WO 2003-GB5464 W 20031216
 OS CASREACT 141:54582; MARPAT 141:54582
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2009 ACS ON STN
 TI Preparation and phosphitylation process of nucleosides in presence of
 imidazole sulfonamide activators
 GI



AB A process for the phosphitylation of an alc. or thiol with a phosphitylation agent in the presence of sulfonamide activator I, wherein n is 0 or an integer from 1 to 4; R for each occurrence is a substituent; X is O or S; is provided. The activator is commonly employed as a salt complex with an organic base. Preferred alcs. or thiols include nucleosides and oligonucleotides. The process is particularly suited for the synthesis of phosphoramidites. Thus, 5'-DMT-N-Bz-2'-deoxyadenosine was prepared and submitted to phosphitylation with 0-3-cyanoethyl-N,N,N',N'-tetraisopropylphosphorodiamidite in presence of N-methylimidazole salt of saccharin to give the corresponding nucleoside phosphoramidite in good yield.

AN 2004:354958 HCAPLUS <<LOGINID::20090807>>

DN 140:339578

TI Preparation and phosphitylation process of nucleosides in presence of imidazole sulfonamide activators

IN Sinha, Nanda Dulal

PA Avecia Biotechnology Inc., USA; Avecia Limited

SO PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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PI	WO 2004035599	A1	20040429	WO 2003-GB4312	20031008 <--
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, BR, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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	AU 2003269239	A1	20040504	AU 2003-269239	20031008 <--
	EP 1554300	A1	20050720	EP 2003-751018	20031008 <--
	EP 1554300	B1	20070523		

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 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

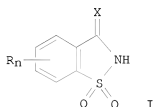
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CN 1329408	C	20070801		
JP 2006508081	T	20060309	JP 2004-544427	20031008 <--
AT 362937	T	20070615	AT 2003-751018	20031008 <--
IN 2005DN01348	A	20090109	IN 2005-DN1348	20050404 <--
US 20060069247	A1	20060330	US 2005-531323	20051011 <--
US 7247720	B2	20070724		
PRAI US 2002-418185P	P	20021015	<--	
WO 2003-GB4312	W	20031008		

OS MARPAT 140:339578

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2009 ACS ON STN
 TI Preparation of oligodeoxyribonucleotides via condensation reaction using
 1,1-dioxo-1,2-dihydro-1λ6-benzo[d]isothiazol-3-one salt activators
 GI



AB A process for the synthesis of oligonucleotides using phosphoramidite chemical is provided. The process employs as activator a 1,1-dioxo-1,2-dihydro-1λ6-benzo[d]isothiazol-3-one, preferably in the presence of an organic base. The 1,1-dioxo-1,2-dihydro-1λ6-benzo[d]isothiazol-3-one is represented by the following structural formula I; wherein n is 0 or an integer from 1 to 4; X is O or S; R for each occurrence is a substituent, preferably each independently, a halo, a substituted or unsubstituted aliphatic group, -NR1R2, -OR3, -OC(O)R3, -C(O)OR3, or cyano; or two adjacent R groups taken together with the carbon atoms to which they are attached form a six membered saturated or unsatd. ring; R1 and R2 are each, independently, H, a substituted or unsubstituted aliphatic group, a substituted or unsubstituted aryl group, or a substituted or unsubstituted aralkyl group; and R3 is a substituted or unsubstituted aliphatic group, a substituted or unsubstituted aryl group, or a substituted or unsubstituted aralkyl group. Preferred organic bases are pyridine, 3-methylpyridine, or N-methylimidazole. Thus, 5'-TCTCCAGCGTGGCCAT-3' was prepared via condensation reaction using salt activator 1,1-dioxo-1,2-dihydro-1λ6-benzo[d]isothiazol-3-one and N-methylimidazole.

AN 2003:42287 HCAPLUS <<LOGINID::20090807>>
 DN 138:90027
 TI Preparation of oligodeoxyribonucleotides via condensation reaction using
 1,1-dioxo-1,2-dihydro-1λ6-benzo[d]isothiazol-3-one salt activators
 IN Sinha, Nanda; Zedalis, William Edward; Miranda, Gregory Keith
 FA Avecia Biotechnology Inc., USA; Avecia Limited
 SO PCT Int. Appl., 43 pp.
 CODEN: PIXXD2
 DT Patent
 LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003004512	A1	20030116	WO 2002-GB3029	20020701 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2452205	A1	20030116	CA 2002-2452205	20020701 <--
	AU 2002319409	A1	20030121	AU 2002-319409	20020701 <--
	EP 1404696	A1	20040407	EP 2002-748994	20020701 <--
	EP 1404696	B1	20060208		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2004533488	T	20041104	JP 2003-510678	20020701 <--
	CN 1549820	A	20041124	CN 2002-817156	20020701 <--
	CN 100430411	C	20081105		
	AT 317395	T	20060215	AT 2002-748994	20020701 <--
	ES 2258151	T3	20060816	ES 2002-748994	20020701 <--
	HU 2004000151	A2	20070828	HU 2004-151	20020701 <--
	IN 2003DN02244	A	20060120	IN 2003-DN2244	20031223 <--
	KR 898083	B1	20090518	KR 2003-716969	20031226 <--
	US 20060041114	A1	20060223	US 2004-482441	20040813 <--
	US 7501505	B2	20090310		
	IN 2005DN02792	A	20061229	IN 2005-DN2792	20050623 <--
	US 20090085006	A1	20090402	US 2008-287116	20081006 <--
PRAI	US 2001-302717P	P	20010703	<--	
	WO 2002-GB3029	W	20020701	<--	
	GB 2002-29443	A	20021218	<--	
	US 2004-482441	A1	20040813		
OS	MARPAT 138:90027				
OSC.G	5				
RE.CNT	11				

THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
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TI Synthesis and Properties of Aminoacylamido-AMP: Chemical Optimization for the Construction of an N-Acyl Phosphoramidate Linkage

AB This paper describes the design and synthesis of a new type of aminoacyl-adenylate analog (aa-AMPN) having an N-acyl phosphoramidate linkage where the oxygen atom of the mixed anhydride bond of aminoacyl-adenylate (aa-AMP) is replaced by an amino group. This new type of aa-AMP analog is expected to be useful as material for studies on the recognition mechanism of the aminoacylation of tRNA and other biochem. reactions. The condensation of phosphoramidite derivs. of carboxamides with nucleoside derivs. failed, because the activated phosphoramidite derivs. reacted with not only the hydroxyl groups but also another reactive species. An alternative approach was examined by the reaction of 5'-O-phosphoramidite adenosine derivs. with carboxamide derivs. The TBTr and TSE groups were chosen for protection of the amino group of amino acid amides and the phosphate group, resp. Detailed studies revealed that the use of 5-(3,5-dinitrophenyl)-1H-tetrazole as an activating catalyst of phosphoramidites resulted in rapid condensation within 10 min to give fully protected aa-AMPN derivs. No side reaction occurred. Deprotection

of these products via a two-step procedure gave aa-AMPN derivs. in good yields. It also turned out that aa-AMPNs thus obtained are stable under both acidic and basic conditions, such as 0.1 M HCl (pH 1.0) and 0.1 M NaOH (pH 13.0).

AN 2000:767110 HCAPLUS <<LOGINID::20090807>>
DN 134:71818
TI Synthesis and Properties of Aminoacylamido-AMP: Chemical Optimization for
the Construction of an N-Acyl Phosphoramidate Linkage
AU Moriguchi, Tomohisa; Yanagi, Terukazu; Kunimori, Masao; Wada, Takeshi;
Sekine, Mitsuo
CS Faculty of Life Science, Tokyo Institute of Technology, Midoriku Yokohama,
226-8501, Japan
SO Journal of Organic Chemistry (2000), 65(24), 8229-8238
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 134:71818
OSC.G 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)
RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
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